

# Corporate social responsibility for implementation of sustainable energy development in Baltic States

Dalia Streimikiene<sup>a,\*</sup>, Zaneta Simanaviciene<sup>b</sup>, Ruslan Kovaliov<sup>b</sup>

<sup>a</sup> Vilnius M. Romeris University, Ateities g., LT-08303 Vilnius, Lithuania

<sup>b</sup> Kaunas Technological University, Faculty of Economics and Management, Laisves al. 55, LT-44309 Kaunas, Lithuania

Received 28 December 2007; accepted 7 January 2008

## Abstract

This article analyses the main problems and challenges of corporate social responsibility in energy sector in Baltic States. Development of socially responsible business in energy sector can provide for the implementation of sustainable energy development without state interventions. This voluntary measure implemented by energy enterprises can ensure efficient public–private partnership in achieving sustainable development targets. The analysis of corporate social responsibility development in energy sector of Baltic States is provided and positive impact of corporate social responsibility on sustainable energy development is evaluated.

© 2008 Elsevier Ltd. All rights reserved.

**Keywords:** Corporate social responsibility; Sustainable energy development

## Contents

1. Introduction . . . . .	813
2. Corporate social responsibility in energy sector . . . . .	814
3. Development of corporate social responsibility in Baltic States . . . . .	815
3.1. Lithuania . . . . .	816
3.2. Latvia . . . . .	817
3.3. Estonia . . . . .	817
4. Sustainable energy development in Baltic States . . . . .	819
4.1. Lithuania . . . . .	819
4.2. Latvia . . . . .	820
4.3. Estonia . . . . .	820
5. Comparison of sustainable development indicators in Baltics . . . . .	820
5.1. General indicators of sustainable development . . . . .	820
5.2. Sustainable energy development indicators . . . . .	820
6. Conclusions . . . . .	823
References . . . . .	824

## 1. Introduction

In today's globally driven energy industry it is no longer possible for an energy company to focus solely on deriving

value only for its shareholders. Many governments and societies at large have begun a robust campaign to ensure that companies using natural resources are addressing long-term issues and have a clear and articulated strategy to be both profitable and responsible at the same time. The only way in which energy companies can achieve this is to first gain the trust of their key stakeholders. Whether these be investors, regulators, employees, NGOs, or others, it is fundamental that

\* Corresponding author. Tel.: +370 37 40 19 58; fax: +370 37 35 12 71.

E-mail address: [dalia@mail.lei.lt](mailto:dalia@mail.lei.lt) (D. Streimikiene).

their operations are conducted in a responsible and sustainable way. Energy companies are increasingly facing broad requirements under which they are expected to identify and respond to stakeholder and societal needs.

The issue of corporate social responsibility (CSR) – broadly defined to include such concepts as sustainability, sustainable development, triple bottom line, corporate citizenship, and integrated sustainable enterprise management – is now challenging the very foundations of the business strategies of the world's leading organizations. CSR is, however, one of the most complex challenges facing businesses today. It is a guiding principle that underpins corporate vision, strategy and decision-making and represents a series of emerging issues that must be “managed” by the energy company in order to maintain its “license to operate”. Either way, the responsible, sustainable company realizes short-term success and builds a stable platform for future growth and profitability, while at the same time, acknowledging its economic, social, and environmental responsibilities and the needs and concerns of a wide range of stakeholders. Often operating in less-developed regions, environmentally sensitive areas, and with huge industrial facilities producing toxic byproducts, the energy industries are at high risk with regard to the ethical, social, and environmental challenges encompassed by CSR [1].

The challenges are acute in the global oil, gas and power supply business where more than 90% of the world's reserves are outside the “developed” countries and successful development may have a huge economic impact on the host country—potentially a powerful lever for broad social and economic development, an attractive target for corruption, or disruptive social impact. There is similarly a significant environmental ‘footprint’ – which impacts along the entire supply chain – with implications for resource use, fragile ecosystems and biodiversity, air and water quality, as well as waste, waste treatment, and waste recovery.

Many companies worldwide are actively developing CSR strategies, policies, procedures and reporting frameworks. For most, the pace at which they realise the benefits of a CSR commitment will be influenced by a number of key factors: the clarity of the business case; the quality of the measures in place; the effectiveness of dialogue with stakeholders; the degree to which CSR is embedded in the business; reporting and disclosure. In general, there is broad acceptance that the business case for action exists. This has tended to be addressed in long-term strategic terms, not driven by shorter-term considerations of cost/benefit analysis.

The aim of the article is to analyse the development of social responsible business in Baltic States and to discuss its impact on sustainable energy development. The main tasks to achieve this goal:

- Analysis of corporate social responsibility concept, tools of corporate sustainability and its implications on energy companies.
- Analysis of corporate social responsibility development in Baltic States.

- Analysis of results achieved in sustainable energy development in Baltic States applying the sustainable energy development indicators framework.
- Discussion and evaluation of the role of corporate social responsibility in achieving sustainable energy development goals in Baltic States.

## 2. Corporate social responsibility in energy sector

In recent years, CSR has gained growing recognition as a new and emerging form of governance in business. It is already established in a global context, with international reference standards set by the United Nations, Organisation for Economic Cooperation and Development (OECD) guidelines and International Labour Organisation (ILO) conventions. CSR applies to a wide variety of company activities, especially in enterprises that operate multinationally in very different social and environmental settings. But it is a voluntary system, and as such, lacks objective, consistent and transparent criteria for workers, consumers and other stakeholders to measure company performance [2].

Since 2000, the European Union has been engaged in developing a European Framework for CSR, with tools for assessing standards. At the end of June 2004, the European Multi-Stakeholder Forum on Corporate Social Responsibility (CSR EMS Forum) reported on the outcome of 20 months of discussions involving the social partners and civil society. Trade unions have played an active role, and the ETUC at its Executive Committee meeting in June 2004 proposed a series of priorities for CSR in Europe. Adopting CSR is said to be in the long-term interests of companies since – in an age of increasing, worldwide consumer awareness – it improves their public image and wins over new customers. The ETUC, however, insists that CSR must not be merely a public relations exercise, but a sustained and challenging effort. CSR must not be a way to avoid dialogue with workers organised in trade unions, or an alternative to labour legislation and collective bargaining.

A business can only claim publicly to be responsible if it first applies the highest standards internally. This means respecting industrial relations; promoting workers' participation through consultation and information procedures, particularly within European Works Councils; developing vocational skills and lifelong training for workers; respecting health and safety standards and adopting preventive measures; promoting gender equality; finding ways for the social partners to work together especially in anticipating and managing change and restructuring; promoting the social rights of workers; enhancing the quality of work and defending and integrating vulnerable groups such as young and disabled people and immigrants [3].

The Global Compact's operational phase was launched at UN Headquarters in New York on 26 July 2000. Today, many hundreds of companies from all regions of the world, international labour and civil society organizations are engaged in the Global Compact, working to advance 10 universal principles in the areas of human rights, labour, the environment and anti-corruption. Through the power of collective action, the

Global Compact seeks to promote responsible corporate citizenship so that business can be part of the solution to the challenges of globalisation. In this way, the private sector – in partnership with other social actors – can help realize the Secretary-General's vision: a more sustainable and inclusive global economy. The Global Compact is a purely voluntary initiative with two objectives: mainstream the 10 principles in business activities around the world and catalyse actions in support of UN goals. To achieve these objectives, the Global Compact offers facilitation and engagement through several mechanisms: policy dialogues, learning, country/regional networks, and projects.

The Global Compact is not a regulatory instrument—it does not “police”, enforce or measure the behaviour or actions of companies. Rather, the Global Compact relies on public accountability, transparency and the enlightened self-interest of companies, labour and civil society to initiate and share substantive action in pursuing the principles upon which the Global Compact is based. The Global Compact is a network. At its core are the Global Compact Office and six UN agencies: Office of the High Commissioner for Human Rights; United Nations Environment Programme; International Labour Organization; United Nations Development Programme; United Nations Industrial Development Organization and United Nations Office on Drugs and Crime.

The Global Compact involves all the relevant social actors: governments, who defined the principles on which the initiative is based; companies, whose actions it seeks to influence; labour, in whose hands the concrete process of global production takes place; civil society organizations, representing the wider community of stakeholders; and The United Nations.

There are numerous benefits to participating in the Global Compact. These include demonstrating leadership by advancing responsible corporate citizenship; producing practical solutions to contemporary problems related to globalisation, sustainable development and corporate responsibility in a multi-stakeholder context; managing risks by taking a proactive stance on critical issues; convening power with governments, business, civil society and other stakeholders; sharing good practices and leanings; accessing the UNs broad knowledge in development issues and improving corporate/brand management, employee morale and productivity, and operational efficiencies.

Lisbon European summit in 2000 adopted the new strategic goal of making Europe the most competitive and dynamic knowledge-based economy in the world by 2010. For the first time, the European Council makes a special appeal to “companies’ corporate sense of social responsibility regarding best practices on lifelong learning, work organization, equal opportunities, social inclusion and sustainable development”. In the same year EU adopted Social Policy Agenda, stressing the importance of CSR in adapting working conditions to the new economy. In next year European Commission published the Green Paper on promoting a European framework for CSR (COM/2001/366) and European Commission Communication on promoting core labour standards. In July 2002 European Commission issued Communication on *Corporate Social*

*Responsibility: A business contribution to sustainable development* (COM/2002/347). On 22 March 2006 European Commission issued a new Communication: *Implementing the Partnership for Growth and Jobs: Making Europe a pole of excellence on CSR*, and launches a ‘European Alliance for CSR’.

Ideally, a Management System (MS) is the inherent management tool that commits both top management and staff. The overall aim of an MS is, of course, to maintain companies’ economic activities and to support its purpose and mission. An Integrated Management System (IMS) is often understood as a synergy between Quality Management Systems (QMS), Environmental Management Systems (EMS) and Safety, Health and Social Management Systems (S + H + S MS). Actually, an IMS could integrate anything that influences business. However, an IMS currently integrates mostly quality, environmental and social aspects. As globalised societies are nowadays in a transition from industrial towards knowledge and information society, it is straightforward also to include Innovation- and Knowledge-Management [4]. Beside named issues to be included in an IMS, also human resources, finance or security perhaps could be added. As there are no national or international standards for implementing IMS in companies, there are several approaches. Actually drivers to implement an IMS originate within the company and not so much from customer demands. But they are perhaps in line with other stakeholder aspects. To guarantee that a MS backs up sustainable development, some preconditions have to be fulfilled. Namely life cycle thinking has to be considered as a key element of sustainability oriented mind-set. Although, a CEO concentrates mainly on tasks inside the company any economic, social and ecological aspect over the whole (product) life cycle, beginning with resource extraction, production, usage, recycling and end-of-life disposal has to be taken into account. Therefore IMS is very useful tool in implementing corporate social responsibility and enhancing sustainable development in energy sector.

### 3. Development of corporate social responsibility in Baltic States

There are huge differences in development of corporate social responsibility in Baltic States. Lithuania is the most advanced country in this field. In Lithuania 45 enterprises and in Latvia 15 enterprises have signed Global Compact Agreement. There are no members of UN Global Compact initiative in Estonia, however situation is changing in Baltic States. Recently ESCOBALT project [5] was financed by the Interreg III B – program of the EU and it has partners from several Baltic Sea Region countries – from Finland, Sweden, the Baltic States, Germany and Poland. The lead partner of the project is the Regional Council of Uusimaa, Finland. This project aimed at adopting common strategies and action plans based on the CSR concept (CSRC) and to promote rational use of energy as a base of CSRC. This will happen through the development of a cooperation of the partners and projects,

building of networks, spreading information and discussing the problems and opportunities behind the energy sector and CSR.

In the following chapters more detailed information on CSR development in energy sector of Baltic States is provided based on results of ESCOBALT project and Bank research project “What Does Business Think about Corporate Social Responsibility? Attitudes and Practices in Estonia, Latvia and Lithuania” conducted in 2005 [6]. The future challenges for CRP development in energy sector are defined identifying the main obstacles and barriers for CRP in energy sector of Baltic States based on results of studies mentioned above.

### 3.1. Lithuania

National Network of socially responsible business enterprises (the National Network) has emerged from the Group of Initiative on responsible business, established at the conference “Responsible Business in Society” in Lithuania in autumn 2004. The founding members of the National Network in Lithuania are the United Nations Development Programme (UNDP) in Lithuania, the Association “Investors” Forum, Association “NETA”, enterprises “Constructus”, “Berlin-Chemie Menarini Baltic”, “Commercial Union Lietuva Gyvybes Draudimas”, “Danisco Sugar”, “Ernst & Young”, “Lideika, Petrauskas, Valiunas ir partneriai LAWIN”, “Libra Holding”, “Lietuva Statoil”, and “Mazeikiu Nafta”.

Corporate social responsibility in energy sector can provide companies within National Network for signing voluntary agreements with national institutions on energy savings, GHG emission reduction, green electricity, heat supply, etc. These voluntary initiatives can ensure sustainable energy development as energy efficiency improvements, use of renewable energy sources and GHG emission reduction are the main challenges for sustainable energy development.

National Network of Responsible Business in Lithuania currently comprises 45 companies, members of the UN Global Compact Initiative. Just three of these companies are energy companies: Mazeikiu Nafta has in its ownership Mazeikiai CHP which also supplies electricity and heat to households in Mazeikiai region and Danisco sugar has CHP for its own use but also supplies heat and electricity to the grid. Lietuva Statoil is owner of large network of petrol distribution stations in Lithuania. Therefore there is very limited number of electricity suppliers in the National Network of Responsible Business in Lithuania able to provide green electricity to the consumers in Lithuania. There is also limited number of companies having energy intensive production as these companies are potential to sign voluntary agreements with Ministry of Environment on energy savings.

The Network of Social Responsible Business was officially launched in April 2005 by a Group of Initiative, which was formed during the first International Conference on the United Nations Global Compact and the Corporate Social Responsibility (CSR) Concept in November 2004. At its launching date the network comprised some 11 companies and business associations, as well as the United Nations Development Programme (UNDP) in Lithuania. The purpose of the National

Network is to exchange knowledge, experience and innovations, organize joint learning forums, thereby improving business strategies and implementing joint projects for the benefit of society. The network operates as an entirely voluntary initiative.

Based on results of ESCOBALT [5] and World Bank project [6] the main barriers for the development of CSR in energy sector of Lithuania are economic, social and environmental. Economic barriers are related with low innovation in enterprises; slow modernisation of production facilities and updating of technological processes. Economic barriers have impact on security of energy supply in Lithuania. Electricity and gas networks have no direct connections to the energy systems of Western Europe, thus, they are dependent on a single supplier of natural gas (Russia) and have no opportunities to integrate into the power systems of Western and Central European countries. Another important barrier is insufficient growth and uneven distribution of investments by regions of the country. The small amount of players in energy markets have negative impact on competition striving for energy costs decrease in the sector. These barriers prevent implementation of corporate social responsibility in energy sector of Lithuania. From environmental point of view the main barriers for the use of renewable energy sources are natural conditions not favourable for hydro, solar and wind energy development. Because of Ignalina NPP operation the large amount of radioactive waste and spent nuclear fuel has been accumulated on the territory of Lithuania. Environmental laws and institutions are in place in Lithuania in accordance with EU Environmental Acquis.

The main barriers for corporate social responsibility development in social sphere: weak co-operation with stakeholders; weak NGOs, insufficient care in competence and motivation of personnel; low awareness of society about energy companies activities; indebtedness of heat consumers, high energy prices comparing with low average income of population reducing initiatives to pay higher price for green (renewable) energy or white energy (saved) support social responsible business in energy sector. However the main barriers for development of social responsible business in energy sector of Lithuania are related with lack of information and awareness. More practical examples are needed in Lithuania on applications of CSR in DH companies (examples of good practices on how this can be best done). Therefore the main conclusion from both projects is that energy companies in Lithuania are not interested to report more openly and transparently about their activities because of low competition in energy sector, low cooperation with stakeholders and low public awareness. Therefore the most important point of social responsibility development in energy sector could be information about CSR, IMS dissemination, public awareness rising and strengthening cooperation with stakeholders. This could help to find rational solutions and to solve existing problems together. Ministry of Social Protection and Labour in Lithuania is then main institution providing information on CSR and promoting development of this concept in Lithuania. The order of Minister of Social Protection and Labour on 22 December

2005 issued the list of measures for corporate social responsibility enhancement during 2006–2008 in Lithuania. These measures include mainly information dissemination campaigns, workshops, good practice case studies, monitoring activities, audits, publication of tutorials, training activities, establishment of awards, etc.

### 3.2. Latvia

Latvia is a country with 2.3 million populations and CSR is on stage of development. Two biggest companies which ones are trying to improve CSR and make it a part of their politics are stock company “Latvenergo” (energy industry) and Latvian public utility involved in the generation and sale of electrical power and thermal energy. It also provides power distribution and telecommunication.

Latvian parliament has established laws and regulations what energy industry has to consider. There are six laws about energy efficiency; power industry law; which contains that there has to be development in energy industry and every citizen has right to choose which service he or she wants to use. Electricity market law requires to provide to all customers good service, to stimulate electricity energy manufacturing, using renewable energy. Protective law establishes marked protected zones, which means that energy industry energy resources are limited. The law target is to determine protective zone and its function. A law about society service regulations establishes requirements for safe, continuous and high quality service for Latvian community and sets tariff which corresponds to economical situation of the country.

Energy company in Latvia has to deal with a lot of social issues, today the price for electricity and heat are the same as in the old EU member states, but the average income in Latvia is significantly lower than in old Europe. It is a big social issue, which could be resolved in two ways, to increase medium level of salaries or decrease the price for energy and heat service and stabilize the cost for service. The price is growing for services more then salaries.

The interests of the company management, employees, and targets in the social sphere have been agreed on and stipulated in the collective agreement. The salaries of the employees of the Joint Stock Company are defined by the regulations on wages. In the course of taking care for its employees not only in the area of security and social guarantees, but also in the field of competitive remuneration the management of the joint stock company has increased the salaries within the limits of possibilities thus partially compensating the decrease of the real salary due to inflation. Each industry has its own trade union; every company has trade union representative who takes care of the employees.

Joint Stock Company ‘Latvenergo’s has signed the Global Compact and its main objective is to reduce constantly the company’s negative impact upon environment by raising efficiency, diminishing the emission of harmful substances, as well as by identifying and reducing to the maximum the possible risks. S/C Latvenergo investment in technology improvement gives not only economical impact, but it also

makes energy production safer and environmentally friendly. The energy industry basic principles are to realize lasting energy and heat production, which conform to environmental, economical and social standards and to be involved in sustainable development of Latvia. Taking into account the growing demands in environment protection and the fact that the public attitude towards it has changed considerably over the last decade. Latvenergo works continuously at reducing the harmful effects caused by the company activities and improving its performance to meet the respective requirements in environment protection. It is within the competence of Latvenergo Department for Environment and Safety at Work to coordinate all Latvenergo activities in environment protection, to ensure meeting the provisions of Latvian legal acts on environment and Latvenergo core objectives, to inform about the adopted amendments and new legal acts on environment and their implementation. More than a half of produced energy by Latvenergo is made of renewable energy resources, every year energy efficiency is increasing and electricity energy losses are decreasing. However the main barriers for social responsibility development in Latvian energy sector are also related with low public awareness and lack of information on energy company’s activities, use of renewable energy sources, energy efficiency improvements and energy savings. Also there is no enough information for energy and other companies in Latvia on corporate social responsibility, Global Compact initiative, Integrated Management Systems development. Good practice case studies needs to be disseminated in Latvian energy sector providing information on costs and benefits in implementing sustainable energy development or corporate social responsibility in energy sector.

### 3.3. Estonia

CSR is a comparatively new concept for Estonia, which has not yet entered the public agenda yet. According to the overall assessment, if at all known, CSR is mostly addressed in the context of charitable giving or contribution to social projects. Few surveys conducted during projects mentioned above suggest that even if activities with linkages to the corporate social responsibility concept are undertaken, they are not interpreted in the CSR framework or as components of work done to systematically promote corporate social responsibility.

The research on the application of the CSR in Estonia altogether is very limited; none has been conducted relative to the energy sector. One of the few general initiatives has been the World Bank survey “Current CSR Attitudes and Practices in Estonia” within the “Enabling a better environment for Corporate Social Responsibility” where 80 Estonia-based companies were interviewed (in 2004–2005); of them 95% private, 4% semi-private and 1% public companies. 50% of the interviewed companies were medium-sized, 36% large and 4% small. 20% of the companies were foreign-funded. The sectors represented were production, financial services and non-financial services. Based on the survey, we can claim that CSR is mostly associated with ethical conduct (about 75% of the respondents), environmentally friendly activities (over



50%); addressing stakeholders concerns (43%); transparency of operations (35%); correcting social inequalities and establishing stakeholder partnerships (one in six companies). According to the Estonian companies interviewed making a profit is the most important role of a company in society followed by ensuring job security, complying with regulations and paying taxes. Relative to transparency and annual reports only 28% of the respondents currently have an anti-corruption policy even though 31% intend to have one in the next 5 years. 67% of the interviewed companies publish an annual report (oddly enough, one third of the very large companies plan to stop publishing their annual report) whereby only 13% of the companies present reports that present environmental performance. Larger firms tend to do this more than smaller firms. As few as 9% of the respondents actually publish annual reports, which present social performance. Again, larger firms tend to do this more than smaller firms.

As to barriers and risks of adopting CSR practices the following were seen of critical importance: overall cost; no link to financial success; focus on short-term gains; no visible results; no government involvement; no appropriate regulation; current government policy not promoting CSR. Estonian companies state that Estonian government's policies do not encourage companies to invest in socially responsible business. Although the risks and barriers to implementing CSR practices are perceived to be principally of a financial nature, the actions perceived to improve the CSR practices of Estonian companies are also non-financial. On the financial front, respondent companies believe tax incentives (66%) and, to a lesser extent, empowerment of local governments to decide on tax exemptions (36%) is paramount for improving CSR practices. On the non-financial front, respondent companies indicate a need for recognition, guidelines, government intervention and dialogue.

CSR reports and respective auditing is not yet taking place in Estonia. Also, there are not yet any consulting or advisory services offered to businesses on that topic. Environmental reports are voluntary, except the ones that need to be made for specific purposes and submitted to mostly governmental organizations (Estonian Association for Environmental Management). There is a small number of companies that are reporting their environmental performance to their stakeholders voluntarily (for example Estonian Fund for Nature, Estonian Energy, printing and publishing company Triip, Open Estonia Foundation, Kroonpress Ltd.).

CSR is not a familiar concept in the energy sector on the local level. District heating companies are small both in terms of their production volumes as well as staff to keep the costs at a minimum level. There are a few municipal enterprises, limited companies that are partly or fully in municipal ownership. Bigger towns and settlements are supplied with heat and power by privatised power companies. Bigger municipally owned district heating companies include Võru and Kuressaare, medium-sized (3000–10,000 MWh/year) operate in Kadrina, Tamsalu, Haljala, Kohila; small (less than 3000 MWh/year) ones are, however, numerous. The aforementioned companies are budgetary agencies within the competence of local

authorities. The reports they present include basic operational statistics only. To minimise the cost of operation their staff consists typically of an accountant, manager and three or four workers—boiler operators to keep the facility running 24 h. Frequently, the water supply, sewerage and heat supply are a combined function with the costs merged where one worker performs several tasks, e.g. a boiler operator deals also with water pipelines, waste water pipes, etc.

Estonia is the only country among Baltic States having green certificate trading. The system of green certificate trading implemented in Estonia has some differences comparing with schemes implemented in other EU member states. The main differences that the scheme is voluntary and there are no legal binding obligations for consumers to buy established amount of Green certificates. Roheline energia (green energy) in Estonia is brand name and identifies energy produced mostly by small independent generators from water and wind, and which is bought by Eesti Energy and resold on the local market. The brand has been developed and marketed by Estonian fund for nature, whose mission is the protection of hereditary values of the Estonian nature and the promotion of sustainable development. The Green Energy Use's Certificate verifies that its owner has made a monetary contribution to cover the purchase and marketing costs of a certain annual amount of renewable energy and donation to the amount of 10 Estonian cents (EUR 0.0034)/kWh to the Estonian Fund for Nature for the financing of its priority activities. The potential profit from the sales of green energy certificates will be allocated to a special fund established by Eesti Energia. More than 90% of electricity consumed in Estonia is produced by Estonian Energy. It is state-owned power production, transmission and distribution company. The energy produced from renewable amounted to 0.5% of the country's total energy production. The allocations will be used for financing the projects related to the development of the production, distribution and supply of energy produced from renewable. Green energy certificates shall be valid for 12 months and it may be renewed for the consecutive periods after the term, in case the owner of the certificate complies with the criteria set for the by year of green energy, and in case he has complied with statutes of the certificate. The total annual amount of green energy indicated on the issued certificates shall not exceed the annual amount of renewable energy sold to Eesti Energia. Supported by green energy consumers Estonian Energy has renovated country's biggest hydropower plant, Linamäe. The plant's designed capacity is 1 MW and its annual energy production is estimated to be 70,000 MWh/year. Estonian Energy also owns and operates one of three 600 kW wind turbines in Virtsu Windpark. Certificates have such specifications:

- *Green energy I category*: certificates shall be issued to legal entities which annual power consumption is over 600,000 kWh. This certificate provides that the owner shall by 120,000 kWh of renewable energy a year.
- *Green certificates II category*: certificates shall be issued to legal entities which annual power consumption is over

300,000 kWh. This certificate provides that the owner shall by 60,000 kWh of renewable energy a year.

- *Green certificates III category*: certificates shall be issued to legal entities which annual power consumption is over 30,000 kWh. This certificate provides that the owner shall by 6000 kWh of renewable energy a year.
- *Green certificates IV category*: certificates shall be issued to for residential customers and proves that is owner shall buy 1200 kWh of renewable energy in a year.

All the certificates are valid for 12 calendar months and include 0.1 EEK/kWh donation to Estonian nature foundations. The experience of green tradable certificates indicates that voluntary measures can be easily implemented in energy sector of Estonia therefore CSR approach needs more marketing in energy sector.

The application of the CSR would bring greater dividends for and could rather be systematically applied by bigger companies, including district heating suppliers (in the Estonian case, e.g. Võru and Kuressaare) with corresponding procedures yet to be introduced. Smaller companies are engaged in social activities per se without documenting it in the CSR framework. Documentation would require additional human and financial resources, which are not available and render it inapplicable on rural municipality level. Maintaining the district heating option on the local level, suppose in settlements with around 3000 inhabitants, is CSR in itself. The most critical obstacles in applying the socially responsible behaviour of Estonian small- and medium-sized enterprises generally relate to building awareness of the CSR itself explaining its underlying principles and benefits; making the concept attractive also for small- and medium-sized companies; the lack of expertise, time, financial and human resources.

There is no organisation in Estonia like in Lithuania (Ministry of Social Protection and Labour) whose main mission is directly related to CSR. Nonetheless there is number of organisations that focus on sustainable development, environmental protection, business ethics and other fields related to CSR. As one of the very first initiatives, the Escobalt project fills the gap of promoting the understanding of CSR in the energy saving context. The first Estonia-wide initiative to systematically deal with the CSR in Estonia is the project Responsible Business Forum in Estonia (2005–2006) that aims to raise awareness of CSR in Estonian society as well as to facilitate a multi-stakeholder dialogue. The project is funded by the Open Estonia Foundation and partners with the Estonian Chamber of Commerce and Industry. The long-term objective of this initiative is, firstly, to create a framework for CSR in Estonia based on a multi-stakeholder perspective and secondly, to develop a Business Forum/Contact Group, which would continuously work on CSR development in Estonia. Therefore for Estonia the critical issue in CSR development is the lack of state policy and institutional capacity following the low awareness of corporate social responsibility, low cooperation among stakeholders, low initiatives of business to engage in CSR and implement IMS. There are no companies which have

signed Global Compact in Estonia though several studies were conducted to evaluate business preferences towards CSR.

#### 4. Sustainable energy development in Baltic States

##### 4.1. Lithuania

Lithuanian sustainable development strategy (SDS) is the main policy document describing the priorities of Lithuanian environmental policies and tools for the implementation of targets set by strategy [7]. Approved by the resolution of the Government of the Republic of Lithuania on 11 September 2003. By the same resolution were established Task force from representatives of all relevant Ministries for the preparation of biennial reports on the implementation of sustainable development strategy and the submission to Sustainable Development Commission chaired by Prime Minister was established on 28 July 2000 by the Governmental resolution. The Biannual Report on implementation of Lithuanian SDS was prepared by group of experts and was evaluated on 2005 and amendments for SDS were prepared in 2006. The Second Biannual Report was prepared in 2007 and analysis of sustainable development indicators was performed for 2002–2006. The sustainable development indicators set established in Lithuanian SDS for monitoring progress towards implementation of SDS goals:

- *Economic indicators*: gross domestic product (GDP), final energy consumption, share of biofuels in transport fuels, share of renewables in TPES, electricity production.
- *Environmental indicators*: urban air quality, groundwater quality, amount of households waste, etc.
- *Social indicators*: employment rate, poverty rate, life expectancy, etc.
- *Regional development indicators*: GDP per capita and its ratio with national average, foreign investments and its ratio with national average, etc.

Eco-effectiveness indicators for indication of decoupling: energy and resource consumption per GDP, emission of pollutants per unit of TPES and unit of GDP. The list of indicators is being published annually by State Department of Statistics to monitor progress of implementation of Lithuanian SDS since 2004. The best result in Lithuania based on biannual reports is achieved in development of eco-efficiency indicators. The GDP growth rates since 2000 exceed the final energy growth rates and final energy consumption growth rates exceeds the pollution growth rate. Therefore the main conclusion from Biannual Report on implementation of sustainable development strategy is that Lithuania has reached the path of sustainable development then decoupling of resource consumption from economic growth and decoupling of pollution from resource consumption is achieved however the main challenges for implementation of sustainable development in Lithuania are related with social dimension of sustainability. The main social indicators of welfare (inequality of income, average life-time expectancy, poverty,

etc.) set for monitoring of implementation of SDS of Lithuania are not decoupling from economic growth. Some of them even exhibit negative trends. Other strategies (National Energy Strategy [8] and National Energy Efficiency Programme [9], Programme on Promotion of Production and Use of Biofuel for 2004–2010 [10]) also include the eco-efficiency indicators mentioned above. These eco-efficiency indicators in energy sector can be used for monitoring progress towards sustainable energy development in Lithuania and for the comparison of results achieved by other Baltic States.

#### 4.2. Latvia

Latvian SDS was approved by the Cabinet of Ministers on 13 August 2002. The Latvian Environment Agency is responsible for the preparation of the National Report of the Indicators of Sustainable Development on yearly basis. Each year starting from 2003, the responsible ministries shall, until 1st August, submit to the Ministry of Environmental Protection and Regional Development the reports concerning the achievement of goals set forth in this strategy and the fulfilment of actions related thereto. The Ministry of Environmental Protection and Regional Development is responsible for the preparation of annual reports on the fulfilment of the Environmental Policy Plan. The Ministry of Environmental Protection and Regional Development is responsible for summarizing the reports submitted and has to submit the report to the Sustainable Development Council and to the Cabinet of Ministers. The assessment shall be performed by the Sustainable Development Council, which shall propose any corrections to the policy and other measures.

#### 4.3. Estonia

Estonian National Strategy on Sustainable Development *Sustainable Estonia 21* was approved by Estonian Parliament (*Riigikogu*) in September 2005. It is an integral and clearly on the sustainability focused conception for the long-term development of the Estonian state and society until the year 2030. General development principle of the country is “to integrate the requirement to be successful in global competition with a sustainable development model and preservation of the traditional values of Estonia”. The SDS defines Estonian long-term development goals of taking into consideration interaction between environmental and development factors. The main goals of Estonian SDS are sustainability of Estonian nation and culture, growth of welfare and ecological balance. Sustainability of the Estonian nation and culture constitutes the cornerstone of sustainable development of Estonia. The development goal postulating this has a fundamental meaning, the persistence of Estonianhood is the highest priority among the development goals of Estonia. Welfare is defined as the satisfaction of the material, social and cultural needs of individuals, accompanied by opportunities for individual self-realisation and for realising one’s aspirations and goals. Achievement of the first two goals will be possible only if the benefits from these goals can be enjoyed by the majority of the

population and the price for achieving the goals is not destructive for the society as an integral organism. Realisation of the goals is possible only in a situation where an absolute majority of the members of society believe in and contribute to their achievement, i.e. in a coherent and harmoniously functioning society.

*Ecological balance*: maintenance of ecological balance in the nature of Estonia is a central precondition for our sustainability. It is also our contribution to global development, following the principle that requires a balance both in matter cycles and in flows of energy at all levels of the living environment. Strategy was drawn up by a consortium led by Tallinn University. Development of the strategy was an open and participatory process aimed to involve all key stakeholders in order to produce better cross-sectoral integration and raise public awareness. SDS was drawn up mainly by means of expert assessments and based on the activities of five working groups with the participation of over 50 experts of different spheres of life. In parallel with the work of expert groups, the key aspects of the strategy were comprehensively discussed with social partners, stakeholders and the public.

### 5. Comparison of sustainable development indicators in Baltics

#### 5.1. General indicators of sustainable development

The main indicator indicating that pathway of country towards sustainable development is human development index (HDI). The index provides information on the main economic and social development trends of the country and represent economic and social dimension of sustainable development. The environmental dimension can be presented by eco-efficiency indicators [11,12].

The HDI index and country ranking in accordance with this index is provided in Table 1. As one can see from information presented in Table 1 the Lithuanian life expectancy is the highest between Baltic States. Education range in 2004 was the highest in Lithuanian and Estonia. GDP per capita in 2005 was the highest in Estonia and Estonian HDI index was slightly higher than in Lithuania in the same year however Lithuania in 1999 was less developed than Estonia according all shares of HDI therefore Lithuania made the biggest progress among Baltic States in terms of social development.

#### 5.2. Sustainable energy development indicators

The main sustainable energy development goals and indicators to monitor achievements of these goals are the following [13]:

1. Increase in energy efficiency expressed by energy intensity of GDP (primary energy/GDP, final energy/GDP).
2. Use of renewable energy sources can be expressed by share of renewables in electricity generation, share of renewables in total primary energy supply and in use of biofuels in transport.



Table 1  
Development of HDI in Baltic States since 1999

Country	HDI and ranking of countries	Life expectancy (years)	Education range (%)	GDP/capita PPP (USD)	Life expectancy index	Education index	GDP index
1999							
Lithuania	0.803 (47)	71.8	80	6.656	0.78	0.93	0.70
Latvia	0.791 (50)	70.1	82	6.264	0.75	0.93	0.69
Estonia	0.812 (44)	70.3	86	8.355	0.76	0.94	0.74
2000							
Lithuania	0.808 (49)	72.1	80	7.106	0.78	0.93	0.71
Latvia	0.800 (53)	70.4	82	9.023	0.76	0.93	0.71
Estonia	0.826 (42)	70.6	86	10.066	0.76	0.95	0.77
2001							
Lithuania	0.824 (45)	72.3	85	8.470	0.79	0.94	0.74
Latvia	0.811 (50)	70.5	86	7.730	0.76	0.95	0.73
Estonia	0.833 (41)	71.2	89	10.170	0.77	0.96	0.77
2002							
Lithuania	0.842 (41)	72.5	90	10.320	0.79	0.96	0.77
Latvia	0.823 (50)	70.9	87	9.210	0.76	0.95	0.75
Estonia	0.853 (36)	71.6	96	12.260	0.78	0.98	0.80
2003							
Lithuania	0.852 (39)	72.3	94	11.702	0.79	0.97	0.79
Latvia	0.836 (48)	71.6	90	10.270	0.78	0.96	0.77
Estonia	0.853 (38)	71.3	92	13.539	0.77	0.97	0.82
2004							
Lithuania	0.857 (41)	72.5	92	13.107	0.79	0.97	0.81
Latvia	0.845 (45)	71.8	90	11.653	0.78	0.96	0.79
Estonia	0.858 (40)	71.6	92	14.555	0.78	0.97	0.83

Comparing results achieved in final energy intensity of GDP of Baltic States one can noticed that Lithuania has achieved the biggest progress in energy intensity decrease during the last years (Fig. 1). The development of final energy intensity of GDP adjusted at power purchasing parity (PPP) in Baltic States is presented in Fig. 1. The pollution intensity decrease in Baltic States has the same trends and energy intensity decrease.

Lithuania has the lowest energy intensity of GDP and the rate of energy intensity decrease in Lithuania was the highest among Baltic States in investigated period.

The next most important sustainable development indicator is the use of renewable energy sources. The targets set by EU directives for RES in EU and established in Baltic States [14] are presented in Table 2.

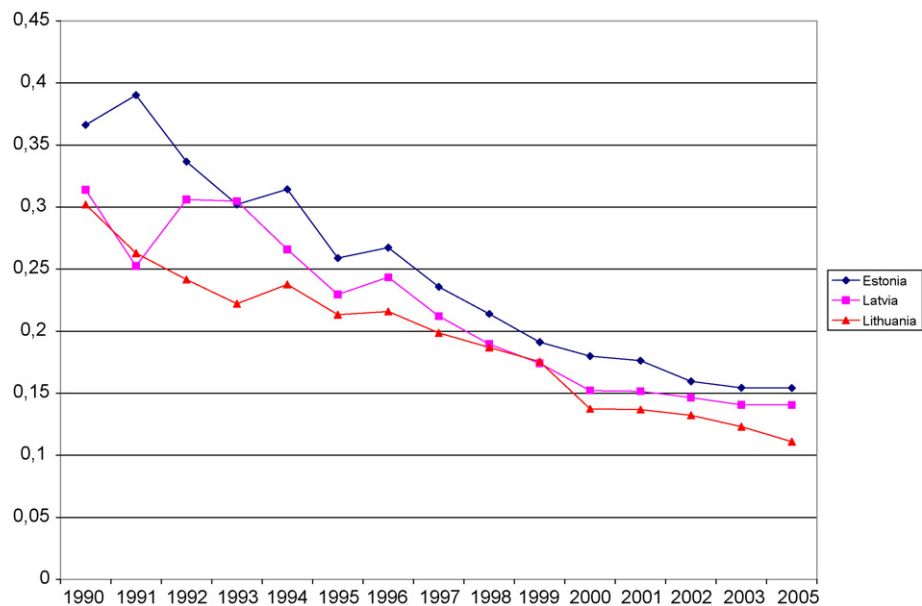


Fig. 1. Final energy intensity of GDP at PPP for Baltic States, toe/USD\*95.

Table 2  
Targets set by EU directives for RES

Indicators	Directive or policy document	Target (%)				Date for achievement
		EU	Lithuania	Latvia	Estonia	
The share of RES in primary energy supply	The White Paper on renewable sources	12	12	50	15	2010
The share of RES in electricity generation	Directive 2001/77/EC on the promotion of electricity produced from RES in the internal electricity market	22.1	7	49.3	5.1	2010
The share of RES in fuel used in transport	2003/30/EC Directive on the promotion of the use of biofuels or other renewable fuels in transport	2	2	2	2	2005
		5.75	5.75	5.75	5.75	2010
		20	20	20	20	2020

As goals set for member states for electricity produced by RES are based on negotiations of countries with EC, the targets presented in Table 2 also reflects targets established for Lithuania, Latvia and Estonia. In Fig. 2 the development of share of RES electricity in Baltic States and targets agreed with EC for year 2010 are presented.

As one can see from Fig. 2 the share of renewable electricity in gross electricity production is very small in Baltic States except Latvia which use a lot of hydro for electricity generation (in Lithuania 3%, in Latvia 29% and in Estonia 0.5% in 2006), compared with over 14% in the EU-15. The EU-15 target for 2010 is 22.1%. Lithuania has agreed with the European Commission to reach 7% of RES in total electricity production by 2010. In 2006, RES sources amounted to almost 9% of the total primary energy mix in Lithuania (in Estonia 10%, in Latvia 43%). The EU-15 average made up to 5.2% in the same year and the target is 12% RES sources in the overall energy balance by 2010. The same target is set for Lithuania in the third National Energy Strategy, adopted in 2007. Latvia and Estonia have just forecast of RES in TPES presented in Fig. 3 and their energy policy documents which are not legally binding (Fig. 3).

The biofuels consumption in Baltic States in 2005 is presented in Table 3. Estonia does not report biofuel consumption in transport. Lithuania is leading country among Baltic States in biofuels consumption because the only Oil Refinery in Baltic's is situated in Lithuania and this has positive impact on biofuels consumption increase.

The analysis of results achieved towards implementing EU RES targets in Baltic States indicated that all Baltic States were successful in achieving RES targets. Though the very ambitious targets for RES were set by Estonia – almost 10 times higher than current situation – however in period 2001–2005 the electricity generation from RES increased more than 5 times in Estonia because of effective promotion measures. One of the most important measures was voluntary green tradable certificates implemented in Estonia. In Latvia the electricity produced in wind farms increased more than 10 times as well during the same period. The increase of RES generation in Lithuania was also significant though country is heavily dependent on nuclear electricity generation and have less policies in place to promote RES. Based on comparison of renewable energy use indicators in Baltic States the main

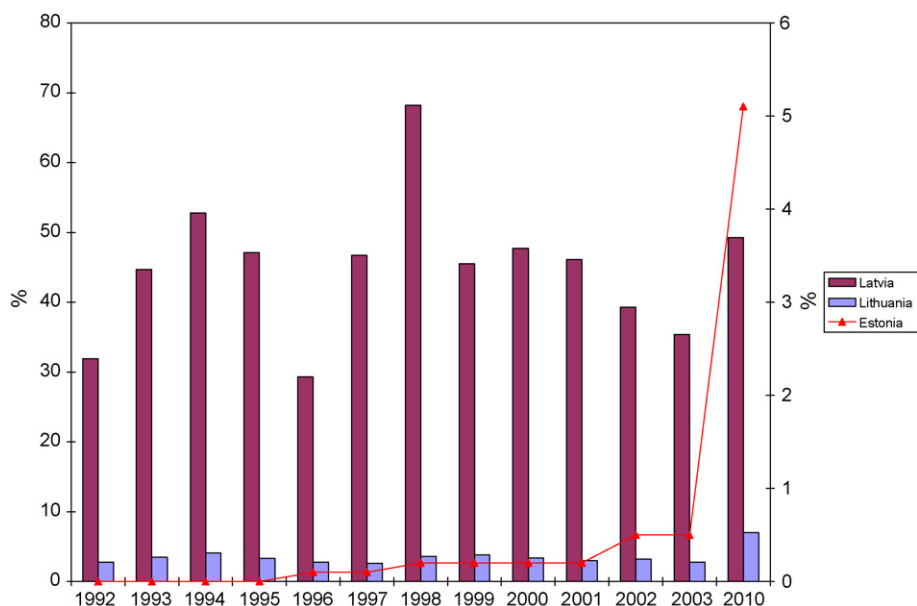


Fig. 2. Share of RES in electricity consumption in Baltic States.

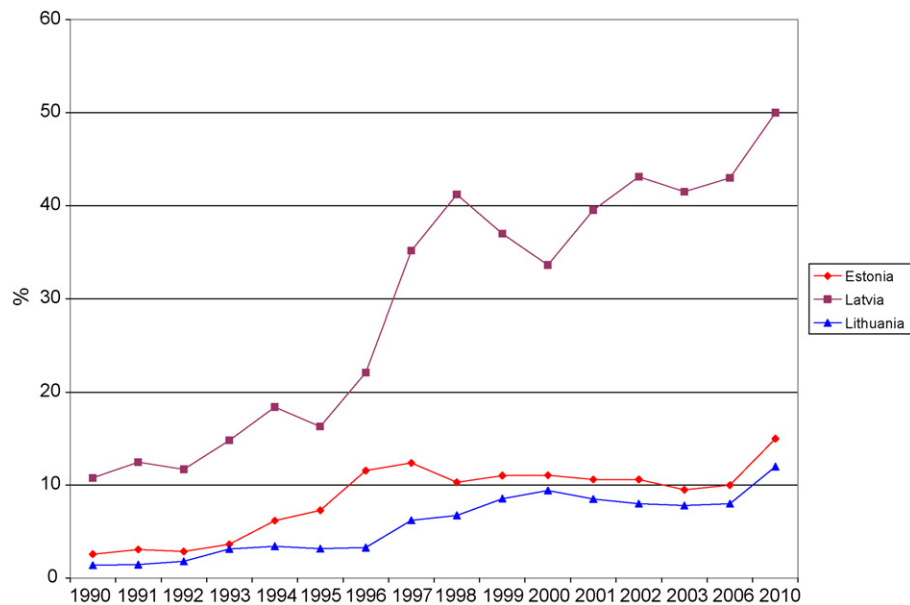


Fig. 3. Share of RES in total primary supply in Baltic States.

Table 3  
Biofuels consumption in Baltic States in 2005, toe

Country	Bioethanol consumption	Biodiesel consumption	Total consumption
Latvia	451	2485	2936
Lithuania	900	7500	8400

conclusion is that Lithuania is leading in biofuels consumption between Baltic States however in use of renewables for electricity generation Estonia has reached the highest progress.

Implementation of CSR and IMS in energy sector of Baltic States can stipulate implementation of other voluntary measures aiming at sustainable energy development in Baltic States, i.e. voluntary agreements with Ministry of Environment on energy savings can be used as the main tool to implement EU Directive 2006/32/EC on end use efficiency and energy services and to ensure further final energy intensity of GDP decrease in Baltic States. Implementation of voluntary green tradable certificates can be treated as very efficient tool to promote further enhancement of use of renewable energy sources and implementation of Directive 2001/77/EC on the promotion of electricity produced from RES in the internal electricity market.

## 6. Conclusions

1. The CSR is the main tool to implement sustainable development in enterprise level and ensure private business input in implementation of sustainable development targets set by sustainable development strategies adopted in all three Baltic States.
2. Corporate social responsibility development in energy sector can create favourable conditions for the implementation of voluntary measures aiming at sustainable energy develop-

ment, i.e. increase in energy use efficiency and use of renewable energy sources.

3. The analysis of CSR development in Baltic States indicated that Lithuania is the most advanced country among Baltic States in development of social corporate responsibility. There are three social responsible enterprises in energy sector in Lithuania which has signed Global Compact and participate in National Network of Responsible Business in Lithuania currently comprised from 45 companies, members of the UN Global Compact Initiative: Mazeikiu Nafta, Danisco sugar and Lithuanian Statoil. The main reason of advanced CSR development in Lithuania comparing with other Baltic States is active involvement of Ministry of Social Protection and Labour in supporting CSR activities and public awareness rising. Lithuania has achieved the greatest progress in energy intensity of GDP decrease comparing with other Baltic States.
4. There are no members of UN Global Compact Initiative in Estonia however Estonia is the only country among Baltic States having implemented voluntary measure to support sustainable energy—voluntary green tradable certificates in electricity sector. This measure provided for successful implementation in Estonia targets set by EU Directive 2001/77/EC on the promotion of electricity produced from RES in the internal electricity market.
5. In Latvia there are 15 companies members of UN Global Compact and country does not have any voluntary measures implemented in energy sector. The country has shown the modest progress in energy intensity of GDP decrease, the share of renewables in electricity is high because of huge hydro potential available in the country.
6. The targets set in sustainable development strategies of Baltic States vary based on priorities of countries however the main indicators showing the progress of country towards sustainable development are eco-efficiency indicators and

- social indicators included in the main UN social development indicator—HDI. Analysis of HDI and eco-efficiency indicators, use of renewables for electricity generation and in transport trends in Baltic States indicated that Lithuania has achieved the biggest progress in terms of the main eco-efficiency indicators and in increase of HDI and country ranking based on this index. The progress in sustainable development achieved by Lithuania can be related with good results in promoting CSR and active role of Lithuanian enterprises in UN Global Compact Initiative maintained by active support of Ministry of Social Protection and Labor.
7. The main recommendations for CSR development in energy sector of Baltic States is to provide dissemination of information on sustainable business, CSR, IMS, increasing public awareness in CSR and strengthening cooperation of stakeholders in energy sector. Implementation of CSR and IMS in energy sector of Baltic States can stipulate implementation of other voluntary measures aiming at sustainable energy development in Baltic States: increase in energy efficiency and enhance of use of renewables.

## References

- [1] Aupperle K, Carroll A, Hatfield J. An empirical examination of the relationship between corporate social responsibility and profitability. *Acad Manage J* 1985;28:446–63.
- [2] Bagnoli M, Watts S. Selling to socially responsible consumers: competition and the private provision of public goods. *J Econ Manage Strategy* 2003;12:419–44.
- [3] Baron D. Private politics, corporate social responsibility and integrated strategy. *J Econ Manage* 2001;20:553–64.
- [4] Kloppfer W. Life cycle based methods for sustainable product development. *Int J Life Cycle Assess* 2003;8:23–36 [Editorial].
- [5] EU. ESCOBALT. Interreg III B – program. <http://www.esprojects.net/en/escobalt>.
- [6] What does business think about corporate social responsibility? Attitudes and practices in Estonia, Latvia and Lithuania, World Bank, Washington, 2005.
- [7] Lithuanian Ministry of Environment. National sustainable development strategy. Vilnius: Lithuanian Ministry of Environment; 2003.
- [8] Lithuanian Ministry of Economy. National energy strategy. Vilnius: Lithuanian Ministry of Economy; 2002.
- [9] Lithuanian Ministry of Economy. National energy efficiency programme for 2006–2010. Vilnius: Lithuanian Ministry of Economy; 2006.
- [10] Streimikiene D. Second progress report on indicators for sustainable energy development: Lithuanian case study. Coordinated Research Project supported by the international atomic energy agency (IAEA). Kaunas: Lithuanian Energy Institute; 2005.
- [11] Streimikiene D. Indicators for sustainable energy development in Lithuania. *Nat Resour Forum* 2005;4:14–24.
- [12] Streimikiene D. Final report on indicators for sustainable energy development: Lithuanian case study. Coordinated Research Project supported by the international atomic energy agency (IAEA). Kaunas: Lithuanian Energy Institute; 2005.
- [13] Lithuanian Ministry of Economy. Programme on promotion of production and use of biofuel for 2004–2010. Vilnius: Lithuanian Ministry of Economy; 2004.
- [14] Streimikiene D. Implementation of EU environmental directives and Kyoto protocol requirements in Lithuanian power and district heating sectors. *Power Eng* 2004;3:30–9.

**Dalia Streimikiene** is a professor of Mykolas Romeris University in Lithuania. She graduated from Kaunas Technological University in 1985 and obtained a PhD in Vilnius Technical University in 1997 and passed habilitation procedures in 2005 in the same university. The main areas of research are energy and environmental economics and policy, development of economic tools for environmental regulation in energy sector, promotion of renewable energy sources and sustainable energy development. She is an author of more than 70 scientific publications in foreign and Lithuanian scientific journals.

**Zaneta Simanaviciene** is a professor of Faculty of Economics and Management at Kaunas Technological University. She is graduated from Kaunas Technological University Faculty of Engineering Economics in 1982. In 1995 she received the degree of doctor of Social Science (Economics) and in 2006 she received the degree of habilitated doctor of Social Science (Economics). She is an author of three monographs and more than 40 scientific publications in the field of enterprise management and business regulation.

**Ruslan Kovaliov** is PhD student at Faculty of Economics and Management at Kaunas Technological University. The areas of research interests are corporate social management, business ethics, cross-cultural management and implementation of sustainable development.